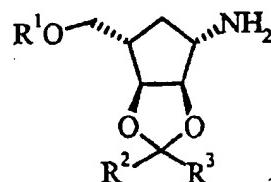


AMENDMENTS TO THE CLAIMS

This Listing Of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A method for preparing a compound compounds of the formula:



and/or mirror image thereof,

wherein in which R¹ is hydrogen, C₁₋₆-alkyl, C₃₋₈-cycloalkyl or benzyl, and in which (i) i) R² is methyl and R³ is ethyl, (ii) ii) R² is hydrogen and R³ is C₁₋₆-alkyl or phenyl, or (iii) iii) R² and R³ together are a group of the formula -(CH₂)_n- with n = 4 to 6, and which is are in the form of a free amine amines or a salt of salts of a dibasic or tribasic organic acid acids, comprising characterized in that:

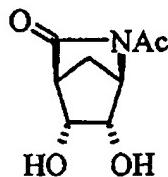
(A) converting a 2-acetyl-2-azabicyclo[2.2.1]hept-5-en-3-one of the formula:



II

and/or mirror image thereof,

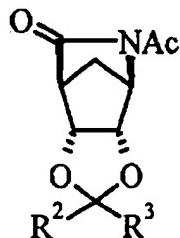
is converted by *cis* hydroxylation of the double bond into a 2-acetyl-5,6-dihydroxy-2-azabicyclo[2.2.1]heptan-3-one of the formula:



III

and/or mirror image thereof,

(B) converting and the latter compound of the formula III is converted by reaction with a ketone or an aldehyde of the formula $R^2\text{-CO-}R^3$, wherein where R^2 and R^3 have the above stated meanings, or by reaction with 2,2-dimethoxypropane or 2,2-dimethoxybutane into a ketal ketone or an acetal of the formula:

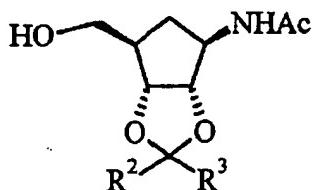


IV,

and/or mirror image thereof,

wherein in which R^2 and R^3 have the above stated meanings, and

(C) converting the latter ketal or acetal of the formula IV is converted by reductive ring opening into a compound of the formula:

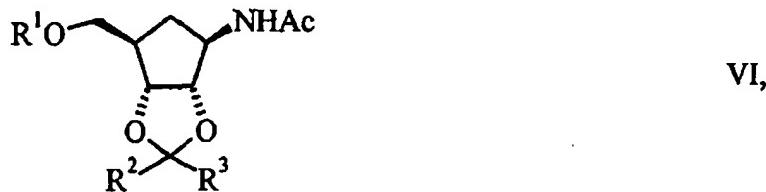


V,

and/or mirror image thereof,

wherein in which R² and R³ have the above stated meanings, and

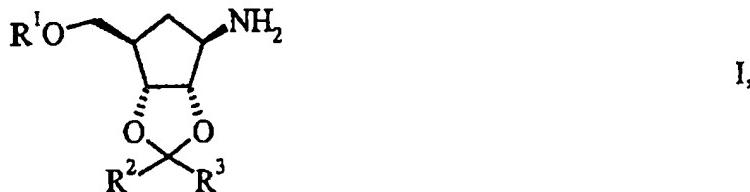
(D) optionally converting the latter optionally compound of formula V an alcohol or an alcoholate thereof of the formula V is converted by reaction with dimethyl sulfate, benzyl chloride or a halide of the formula R¹-X in which wherein R¹ has the above stated meaning other than apart from hydrogen, and X is bromine or iodine, into an ether of the formula:



and/or mirror image thereof,

wherein in which R¹ has the above stated meaning other than hydrogen and R² and R³ have the above stated meanings,

(E) converting and in which a compound of the formula V or VI is converted by alkaline hydrolysis into a compound of the formula:



and/or mirror image thereof,

wherein in which R¹, R² and R³ have the above stated meanings, and

(F) and the latter is optionally converting the compound of the formula I converted by addition of a dibasic or tribasic organic acid into the corresponding salt in which wherein R¹, R² and R³ have the above stated meanings.

Claim 2 (Currently Amended): The method as claimed in claim 1, characterized in that wherein the *cis* hydroxylation of the double bond is carried out using osmium tetroxide.

Claim 3 (Currently Amended): The method as claimed in claim 2, characterized in that wherein the osmium tetroxide is used in an amount of from 0.1 to 2.0 mol percent mol%, preferably in an amount of from 0.2 to 0.9 mol%, based on the compound compounds of the formula II, and the compound of the formula II latter is regenerated during the reaction.

Claim 4 (Currently Amended): The method as claimed in claim 3, characterized in that wherein the osmium tetroxide is regenerated by adding a sterically demanding N-oxide or a mixture of a sterically demanding amine with hydrogen peroxide.

Claim 5 (Currently Amended): The method as claimed in at least one of claims 1 to claim 4, characterized in that wherein the formation of the ketal or acetal of formula IV is carried out with acid catalysis.

Claim 6 (Currently Amended): The method as claimed in claim 5, characterized in that wherein sulfuric acid and/or p-toluenesulfonic acid is used for the acid catalysis.

Claim 7 (Currently Amended): The method as claimed in ~~at least one of claims 1 to claim 6, characterized in that wherein~~ acetone or 2,2-dimethoxypropane is employed for forming the ketal or acetal.

Claim 8 (Currently Amended): The method as claimed in ~~at least one of claims 1 to claim 7, characterized in that wherein~~ the reductive ring opening is carried out with a complex metal hydride, preferably with NaBH₄.

Claim 9 (Currently Amended): The method as claimed in ~~at least one of claims 1 to claim 8, characterized in that wherein~~ an alcohol of the formula V is converted with dimethyl sulfate into the methyl ether.

Claim 10 (Currently Amended): The method as claimed in ~~at least one of claims 1 to claim 8, characterized in that wherein~~ an alcohol of the formula V is converted with methyl iodide into the methyl ether.

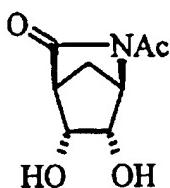
Claim 11 (Currently Amended): The method as claimed in ~~at least one of claims 1 to claim 10, characterized in that wherein~~ the alkaline hydrolysis is carried out with at least one alkali metal or alkaline earth metal hydroxide selected from the group consisting of LiOH, NaOH, KOH, Ca(OH)₂, and Ba(OH)₂, in aqueous and/or alcoholic solution or suspension.

Claim 12 (Currently Amended): The method as claimed in claim 11, characterized in that wherein the alkaline hydrolysis is carried out under a pressure of from 1 to 10 bar, ~~particularly preferably from 1 to 2 bar,~~ and at a temperature ~~temperatures~~ of from 50 to 150°C, ~~particularly preferably from 80 to 100°C.~~

Claim 13 (Currently Amended): The method as claimed in at least one of claims 1 to claim 12, characterized in that wherein the organic acid is selected from the group consisting of oxalic acid free of water of crystallization and/or containing water of crystallization, (+)-, (-)- or meso-tartaric acid, (+)- or (-)-malic acid, tartronic acid, mesoxalic acid and oxaloacetic acid.

Claim 14 (Currently Amended): The method as claimed in claim 13, characterized in that wherein oxalic acid free of water of crystallization and/or containing water of crystallization is employed as organic acid for the salt formation.

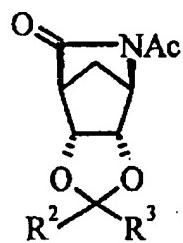
Claim 15 (Currently Amended): A compound of the formula:



I.

or mirror image thereof.

Claim 16 (Currently Amended): A compound of the formula:



IV,

or mirror image thereof,

wherein in which R¹, R² and R³ have the meanings stated in claim 1. (i)

R² is methyl and R³ is ethyl, (ii) R² is hydrogen and R³ is C₁₋₆-alkyl or phenyl, or (iii)

R² and R³ together are a group of the formula -(CH₂)_n- with n = 4 to 6.

Claim 17 (Currently Amended): A compound of the formula:

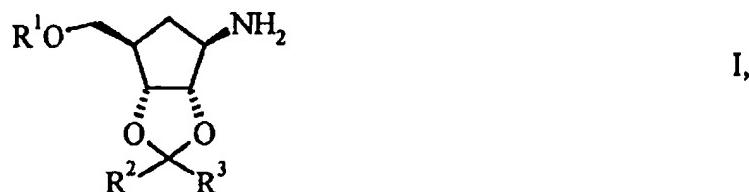


or mirror image thereof,

wherein in which R¹, R² and R³ have the meanings stated in claim 1.

R¹ is C₁₋₆-alkyl, C₃₋₈-cycloalkyl or benzyl, and (i) R² is methyl and R³ is ethyl, (ii) R² is hydrogen and R³ is C₁₋₆-alkyl or phenyl, or (iii) R² and R³ together are a group of the formula -(CH₂)_n- with n = 4 to 6.

Claim 18 (Currently Amended): A salt of a dibasic or tribasic organic acid of compounds of the formula:



or mirror image thereof,

wherein in which R¹, R² and R³ have the meanings stated in claim 1.

R¹ is hydrogen, C₁₋₆-alkyl, C₃₋₈-cycloalkyl or benzyl, and (i) R² is methyl and R³ is ethyl, (ii) R² is hydrogen and R³ is C₁₋₆-alkyl or phenyl, or (iii) R² and R³ together are a group of the formula -(CH₂)_n- with n = 4 to 6.

Claim 19 (New): The method as claimed in claim 2, wherein the osmium tetraoxide is used in an amount of from 0.1 to 2.0 mol percent, based on the compound of the formula II, and the compound of the formula II is regenerated during the reaction.

Claim 20 (New): The method as claimed in claim 1, wherein the formation of the ketal or acetal of formula IV is carried out with acid catalysis.

Claim 21 (New): The method as claimed in claim 20, wherein sulfuric acid and/or p-toluenesulfonic acid is used for the acid catalysis.

Claim 22 (New): The method as claimed in claim 6, wherein acetone or 2,2-dimethoxypropane is employed for forming the ketal or acetal.

Claim 23 (New): The method as claimed in Claim 8, wherein the complex metal hydride is NaBH₄.

Claim 24 (New): The method as claimed in claim 1, wherein the reductive ring opening is carried out with a complex metal hydride.

Claim 25 (New): The method as claimed in claim 24, wherein the complex metal hydride is NaBH₄.

Claim 26 (New): The method as claimed in claim 1, wherein an alcohol of the formula V is converted with dimethyl sulfate into the methyl ether.

Claim 27 (New): The method as claimed in claim 1, wherein an alcohol of the formula V is converted with methyl iodide into the methyl ether.

Claim 28 (New): The method as claimed in claim 1, wherein the alkaline hydrolysis is carried out with at least one alkali metal or alkaline earth metal

hydroxide selected from the group consisting of LiOH, NaOH, KOH, Ca(OH)₂, and Ba(OH)₂, in aqueous and/or alcoholic solution or suspension.

Claim 29 (New): The method as claimed in claim 12, wherein the alkaline hydrolysis is carried out under a pressure of from 1 to 2 bar, and at a temperature of from 80 to 100°C.

Claim 30 (New): The method as claimed in claim 1, wherein the alkaline hydrolysis is carried out under a pressure of from 1 to 10 bar, and at a temperature of from 50 to 150°C.

Claim 31 (New): The method as claimed in claim 30, wherein the alkaline hydrolysis is carried out under a pressure of from 1 to 2 bar, and at a temperature of from 80 to 100°C.

Claim 32 (New): The method as claimed in claim 1, wherein the organic acid is selected from the group consisting of oxalic acid free of water of crystallization and/or containing water of crystallization, (+)-, or (-)- or *meso*-tartaric acid, (+)- or (-)-malic acid, tartronic acid, mesoxalic acid and oxaloacetic acid.

Claim 33 (New): The method as claimed in claim 32, wherein oxalic acid free of water of crystallization and/or containing water of crystallization is employed as organic acid fro the salt formation.